



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,691	06/13/2005	Toshio Tokunaga	Q85083	7047
23373	7590	06/14/2007	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			KNABLE, GEOFFREY L	
		ART UNIT	PAPER NUMBER	
		1733		
		MAIL DATE	DELIVERY MODE	
		06/14/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/516,691	TOKUNAGA, TOSHIO
	Examiner	Art Unit
	Geoffrey L. Knable	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \*    c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/6/04; 3/7/06.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_.

1. Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, lines 1-2, reference is made to apparently a step of "shaping" of the cylindrical carcass band on a building drum prior to forming and shaping the green case. It however is not clear what physical manipulation of the carcass band is required by this "shaping" of the cylindrical carcass band. In particular, as it seems that this is not in reference to the toroidal shaping of the green case (for joining with the belt/tread, this being later defined in the claim), it is not clear what other shaping is involved here. If this is simply referencing the forming of the carcass band, it might be clearer to simply refer to e.g. "formed" rather than "shaped".

In claim 3, lines 3-4 are grammatically awkward and confusing in referencing "approaching to and separating" and "displacing" with respect to the bead lock means. In particular, it is not clearly indicated that these are movement capabilities of the bead lock means - it seems that this should be more clearly reflected in the claim language. An analogous ambiguity is presented by the reference to "displacing" at line 7.

In claim 4, line 3, no antecedent has been established for "the bead core and bead filler". Further, as the bead core and filler are not part of the apparatus, it is not entirely clear that the scope of this with requirement can be readily and definitely ascertained.

In the last line of claim 6, no antecedent has been established for "the bead receiving face" (this not being first referenced until claim 5).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumagai et al. (US 5,181,982) or Mallory et al. (US 3,833,445).

Kumagai discloses a method of building a tire in which a green case composed mainly of a cylindrical carcass band (31/ fig. 4a), annular bead cores and bead fillers (32/33) is arranged on an outer peripheral side of a tire building drum, and a central portion of the green case is expansion-deformed in a radial direction while approaching both the bead cores to each other under a restraint of the bead cores by the tire building drum (fig. 4b), and then the green case is pressed onto an inner peripheral face of a belt-tread band (34) composed mainly of a belt and a tread, and thereafter each end portion of the carcass band is turned around the bead core (fig. 4b; col. 5, lines 32-45), wherein the carcass band is pushed onto rigid support members (11) arranged inward in an axial direction of the carcass band over a whole of an arranging region of the bead core and the bead filler together therewith in the turning of the carcass band (note the illustrated radial extent of the support relative to the bead/filler - this is considered to

satisfy this requirement). A method as required by claims 1 and 2 is therefore anticipated by this disclosure.

Mallory et al. discloses a method of building a tire in which a green case composed mainly of a cylindrical carcass band (e.g. 7), annular bead cores (232) and bead fillers (e.g. note bead filler illustrated in fig. 13) is arranged on an outer peripheral side of a tire building drum, and a central portion of the green case is expansion-deformed in a radial direction while approaching both the bead cores to each other under a restraint of the bead cores by the tire building drum (e.g. figs. 12-13 or 23), and then the green case is pressed onto an inner peripheral face of a belt-tread band (e.g. figs. 13-14) composed mainly of a belt and a tread, and thereafter each end portion of the carcass band is turned around the bead core (figs. 15-16; 24-25), wherein the carcass band is pushed onto rigid support members (125/271) arranged inward in an axial direction of the carcass band over a whole of an arranging region of the bead core and the bead filler together therewith in the turning of the carcass band (note the illustrated extent of the support relative to the bead/filler - this is considered to satisfy this requirement). A method as required by claims 1 and 2 is therefore anticipated by this disclosure.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mallory et al. (US 3,833,445) taken in view of at least one of [Missioux (US 3,560,302) and DE 1288301 to Continental].

With respect to claim 3, Mallory et al. discloses a tire building drum including a substantially cylindrical building bladder (36), a pair of axially and radially movable bead

lock means (70), double fold bladders (184; figs. 15-16) and plural rigid support members (80 or 271) inside the bladder and displaceable radially to form a support of given width. The support members are not however described as aligned in a peripheral direction "without space" in the expanded position as claimed (e.g. note the space between adjacent elements 125 in fig. 4).

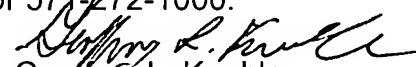
Missioux is directed to a similar tire building drum with expandable supports for the crown and side of the tire and in particular teaches providing the internal rigid elements (note esp. side elements 2' and 2") such that they form a continuous surface in the expanded position so as to allow high precision in the tire building and turn-up operations (e.g. col. 8, lines 2-14). DE '301 provides a similar teaching of an internal rigid side support (5) inside a bladder of a drum and in particular indicates that this support should include two parts (5 and 5') that are nested in the collapsed positions presumably to allow a more continuous surface when expanded - note esp. figs. 13-15. To configure the side supports of Mallory in the form of two slightly differently configured supports that would nest in the collapsed position such that a continuous support is provided when expanded would therefore have been obvious and would have been expected to enable more precise building/turn-up operations due to the continuous support provided thereby. A drum as required by claim 3 is therefore considered to be obvious. Claims 1 and 2 have been included within this rejection as well to the extent that the reference to a "whole of an arranging region" were to be read to require continuous circumferential support.

As to claim 4, Mallory et al. would clearly suggest providing support that would extend in a width as claimed. As to claims 5 and 8, the concave surface 96 is considered to satisfy this requirement. As to claim 6, part 200 of the bladder covers the bead receiving face. As to claim 7, the rigid supports of both Mallory et al. and Missioux as well as DE '301 are activated by axial reciprocation and cooperating links.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
June 6, 2007